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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,543	07/11/2003	Lauren Barghout	17461-4001	5177
7590 Dr. Lauren Barghout 3420 Rubin Drive Oakland, CA 94602			EXAMINER PERUNGA VOOR, SATHYANARAYA V	
			ART UNIT 2624	PAPER NUMBER
			MAIL DATE 12/06/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/618,543	BARGHOUT ET AL.	
	Examiner	Art Unit	
	Sath V. Perungavoor	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,11 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,11 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant(s) Response to Official Action

- [1] The response filed on September 27, 2007 has been entered and made of record.

Response to Arguments/Amendments

- [2] Presented arguments have been fully considered, but are rendered moot in view of the new ground(s) of rejection necessitated by amendment(s) initiated by the applicant(s).

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

- [3] Regarding claim 11, the disclosed invention lacks utility. Claimed invention does not produce a useful, concrete and tangible result.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

- [4] Claim 11 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is

most nearly connected, to make and/or use the invention. The limitation of, “the indices including ordinate level within schema structure, perceptual schema, and human categorization”, is not disclosed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[5] Claims 1, 3, 4, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chu et al. (“Chu”) in view of Gonzalez et al. (“Gonzalez”).

Regarding claim 1, Chu meets the claim limitations, as follows:

An electronic digital image processing system [figs. 6-1, 6-15], comprising: one or more pre-processors [fig. 6-15: *inherently present*], a processing engine (*i.e. program or software inherently present*) with multiple processing units (*i.e. each layer*) each re-parameterizing input variables (*i.e. raw images in RL layer*) to graded category variables (*i.e. TAH*) to accomplish processing functions, the processing functions including segmentation (*i.e. section 6.3.1*) and grouping by similarities (*i.e. clustering image objects*) [fig. 6-1; page 151, para. 2], a perceptual schema (*i.e. metadata*) database [page 149, para. 4], and an output generator that produces structured image data [*abstract: image and metadata is a structured image data*].

Chu does not explicitly disclose the following claim limitations (emphasis added):

The processing functions including color segmentation.

However, in the same field of endeavor Gonzalez discloses the deficient claim limitations, as follows:

The processing functions including color segmentation [*page 331, para. 2*].

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Chu with Gonzalez to implement color segmentation, the reasoning being to apply Chu's invention to color images.

Regarding claim 3, Chu meets the claim limitations, as follows:

The system of claim 1, wherein the system processes digital images (*i.e. raw images*) in an adaptive fashion, with each processing unit (*i.e. layer*) making adjustments to the data in the schema (*i.e. metadata*) and adapting the data adjustments (*i.e. processed data is serves as input to the next layer*) made by other processing units in processing the digital image [*fig. 6-1; page 149, para. 4*].

Regarding claim 4, Chu meets the claim limitations, as follows:

The system of claim 1, wherein the processing units (*i.e. layers*) are inter-dependent with each processing unit (*i.e. layer*) employing output from other processing units (*i.e. layer*) and provides output for use by other processing units (*i.e. layer*) in their respective processing function [*fig. 6-1*].

Regarding claim 11, Chu meets the claim limitations, as follows:

A data structure stored on a computer-readable medium (*i.e. metadata*) for describing perceptual data of a digital image [fig. 6-1] comprising: numeric data that describe the digital image [fig. 6-1; page 149, para. 4; RL layer, image pixel data]; linguistic data that describe the digital image, the linguistic data including segmentation (*i.e. section 6.3.1*) [fig. 6-1; page 149, para. 4; KL layer, TAH]; indices (*i.e. layer*) that identify the numeric data and the linguistic data with each level of processing, the indices including ordinate level within schema structure, perceptual schema, and human categorization [fig. 6-1; page 149, para. 4]; and labels (*i.e. SR- spatial relationship*) that associate the numeric data (*i.e. pixel data*) and the linguistic data (*i.e. TAH*) with perceptual concepts (*i.e. shape and spatial relationship*) [fig. 6-1; page 150, para. 3].

Chu does not explicitly disclose the following claim limitations (emphasis added):

Color segmentation.

However, in the same field of endeavor Gonzalez discloses the deficient claim limitations, as follows:

Color segmentation [page 331, para. 2].

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Chu with Gonzalez to implement color segmentation, the reasoning being to apply Chu's invention to color images.

Regarding claim 12, Chu meets the claim limitations, as follows:

A method of query processing in an electronic image retrieval system [fig. 6-11], comprising: receiving one or more query (*i.e. KEQL*) input describing the image in linguistic terms [page 172, para. 1]; translating (*i.e. query planner*) the linguistic query input (*i.e. KEQL*) into a query image descriptor (*i.e. query execution graph*), the query image descriptor including segmentation (*i.e. feature extraction*) [fig. 6-11; page 172, para. 1]; comparing the query image descriptor to the image descriptor of images stored in a database [page 176, para. 4]; and retrieving the image with image descriptor that most closely matches the query image descriptor [page 176, paras. 4 and 5].

Chu does not explicitly disclose the following claim limitations (emphasis added):

Color segmentation.

However, in the same field of endeavor Gonzalez discloses the deficient claim limitations, as follows:

Color segmentation [page 331, para. 2].

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Chu with Gonzalez to implement color segmentation, the reasoning being to apply Chu's invention to color images.

Conclusion

[6] Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

[7] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Sath V. Perungavoor whose telephone number is (571) 272-7455. The examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Matthew C. Bella whose telephone number is (571) 272-7778, can be reached on Monday to Friday from 9:00am to 5:00pm. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit: 2624

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Dated: November 29, 2007

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ⁱ Content-Based Image Retrieval Using Metadata and Relaxation Techniques
ⁱⁱ Digital Image Processing



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